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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,269	03/27/2001	Shaohua Yu	Q62636	7689
7590	11/02/2004		EXAMINER	
SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC 2100 Pennsylvania Avenue, N.W. Washington, DC 20037-3213			WONG, BLANCHE	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/817,269	YU, SHAOHUA	
	Examiner	Art Unit	
	Blanche Wong	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 March 2001.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-95 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 46-95 is/are allowed.
 6) Claim(s) 1-6 and 27-31 is/are rejected.
 7) Claim(s) 7-26 and 32-45 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1.) Certified copies of the priority documents have been received.
 2.) Certified copies of the priority documents have been received in Application No. _____.
 3.) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 3/27/01.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “a fourth process means for converting said second type of frames to a third type of frames corresponding to in said data packets; and a second transmitting means for transmitting the extracted data packets to said upper layer side device”, as recited in claim 46, and similarly in claims 70 and 95, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: grammatical and typographical errors, and misspellings. On p. 1, ln. 6, -- a interfacing apparatus – should be “an interfacing apparatus”. On. p. 12, ln. 11, -- sSTM – should be replaced by “STM”. On p. 12, ln. 30, -- In stead – should be “Instead”.

Appropriate correction is required.

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

4. Claims 1,27,46,70 are objected to because of the following informalities: consistency.

- With regard to claim 1, ln. 3 recites – said upper layer side device – and ln. 11 recites – the lower layer side device --. With regard to claim 27, ln. 4 recites – said lower layer side device – and ln. 10 recites – the lower layer side device --.

Applicant is requested to use either "said" or "the", but not one of each, in order to keep reading consistency within the documentation.

- With regard to claim 27, Applicant is requested to replace – overheads of said data packet – with "overheads corresponding to said data packets", as recited in claim 1, ln. 9.
- With regard to claims 46 and 70, Applicant is requested to delete the wording – said apparatus – both in ln. 2, to read consistently with claim 1 – comprising – in ln. 2.

Appropriate correction is required.

5. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 95 has been renumbered 94 respectively.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1-5 and 27-31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell et al. (U.S. Pat No. 6,584,118) in view of Ishii et al. (U.S. Pat No. 5,323,392).

With regard to claims 1 and 27, Russell discloses Ethernet routers 207,208 (a first receiving means) and Ethernet port card 205,206 (a second receiving means). Together, they perform protocol stacking Fig. 3, col. 6, ln. 3-12, including mapping Ethernet frames into one or more SDH frames (a second processing means), col. 7, ln. 33-35, and directly into SDH data frames (a first processing means), col. 7, ln. 55-56. See also Fig. 4, col. 7, ln. 18-col. 8, ln. 26. A first and second multiplexers 201,202 (a first transmitting means) where resides the Ethernet port cards 205,206 are connected via an STM-fiber ring 2000. However, Russell fails to explicitly show a type of frames containing a SAPI field including a SAPI identifier and an information field including said data packets.

In an analogous art, Ishii discloses a frame including SAPI and information Fig. 6. See also col. 5, ln. 50-88.

A person of ordinary skill in the art would have been motivated to employ Ishii in Russell in order to have a frame with SAPI and information. The suggestion/motivation to do so would have been to provide for interconnecting data processing devices or networks. Ishii, col. 3, ln. 30-31. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Russell and Ishii to obtain the invention as specified in claims 1 and 27.

With regard to claims 2 and 28, 4 and 30, the combination of Russell and Ishii discloses the apparatus of claim 1. However, the combination fails to explicitly show a format of start flag, SAPI identifier as address field, control field, FCS field, and end flag.

In an analogous art, Ishii discloses flags, address, control and FCS. Fig. 6.

A person of ordinary skill in the art would have been motivated to employ Ishii in Russell in order to have a format of start flag, SAPI identifier as address field, control field, FCS field, and end flag. The suggestion/motivation to do so would have been to provide for interconnecting data processing devices or networks. Ishii, col. 3, ln. 30-31. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Russell and Ishii to obtain the invention as specified in claims 2 and 28, 4 and 30.

With regard to claims 3 and 29, the combination of Russell and Ishii discloses the apparatus of claim 2. However, the combination fails to explicitly show a SAPI field of one single octet, and a control field of one single octet.

In an analogous art, Ishii discloses a SAPI field of one single octet Fig. 6, and a control field of one single octet Fig. 7.

A person of ordinary skill in the art would have been motivated to employ Ishii in Russell in order to have a SAPI field of one single octet, and a control field of one single octet. The suggestion/motivation to do so would have been to provide for interconnecting data processing devices or networks. Ishii, col. 3, ln. 30-31. At the time

the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Russell and Ishii to obtain the invention as specified in claims 3 and 29.

With regard to claims 5 and 31, the combination of Russell and Ishii discloses the apparatus of claim 4. However, the combination fails to explicitly show an address field of one single octet, a control field of one single octet, and a SAPI field of two octets.

In an analogous art, Ishii discloses an address field of one single octet (LAPB), a control field of one single octet Fig. 7, and a SAPI field of two octets Fig. 6 (one LAPD).

A person of ordinary skill in the art would have been motivated to employ Ishii in Russell in order to have an address field of one single octet, a control field of one single octet, and a SAPI field of two octets. The suggestion/motivation to do so would have been to provide for interconnecting data processing devices or networks. Ishii, col. 3, ln. 30-31. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Russell and Ishii to obtain the invention as specified in claims 5 and 31.

8. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Russell and Ishii as applied to claims 1-5, 27-71 above, and further in view of Tomar et al. (U.S. Pat No. 6,804,248).

With regard to claim 6, the combination of Russell and Ishii discloses the apparatus of claim 3. However, the combination fails to explicitly show FIFO and adapting the rate.

In an analogous art, Tomar discloses FIFO in Fig. 13, and state machine 1740 that synchronizes the counters.

A person of ordinary skill in the art would have been motivated to employ Tomar in Russell and Ishii in order to have FIFO and different rates. The suggestion/motivation to do so would have been to provide for multiple staging of optical network systems that require a large number of varying components to handle the different levels of communication signals. Tomar, col. 3, ln. 14-16. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Tomar, Russell and Ishii to obtain the invention as specified in claim 6.

Allowable Subject Matter

9. Claims 7-26 and 32-45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 46-95 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claim 46, the prior art of record fails to anticipate or make obvious a second receiving means from a lower layer side device, a third processing means to form a second type of frames, a fourth process means for converting a second type of frames to a third type of frames, and a second transmitting means to an upper layer side device. Russell and Tomar both disclose a receiving and transmitting means, but a second or two of each. Russell and Tomar both further disclose a first and second process means and thus types of frame, but not a third or fourth of each.

With regard to claim 70, the prior art of record fails to anticipate or make obvious converting a second type of frames to a third type of frames corresponding. Similar to claim 46, Russell or Tomar fails to teach a third type of frames.

With regard to claim 95, the prior art of record fails to anticipate or make obvious a first, second, third, and fourth processing means. Similar to claim 46, Russell or Tomar fails to teach a third and fourth process means.

Conclusion

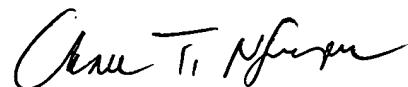
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW

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October 25, 2004



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